
परीक्षण छलनी — विशिष्टि

भाग 1 वायर क्लॉथ परीक्षण छलनी

(चौथा पुनरीक्षण)

Test Sieves — Specification

Part 1 Wire Cloth Test Sieves

(*Fourth Revision*)

ICS 19.120

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FOREWORD

This Indian Standard (Part 1) (Fourth Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Sieves, Sieving and Other Sizing Methods Sectional Committee had been approved by the Civil Engineering Division Council.

This standard was first published in 1953 and subsequently revised in 1962, 1978 and 1985. The second revision of this standard was published in three parts, namely,

- Part 1 Wire cloth test sieves
- Part 2 Perforated plate test sieves
- Part 3 Methods of examination of test sieves

The third revision of this standard (Part 1), was taken up in view of the experience gained during the course of implementation of this standard and also to make it technically equivalent with the following International Standards published by the International Organization for Standardization (ISO):

- ISO 565-1983 Test sieves — Metal wire cloth, perforated plate and electroformed sheet — Nominal sizes of openings
- ISO 3310-1-1982 Test sieves — Technical requirements and testing — Part 1: Test sieves of metal wire cloth

In third revision, the number of aperture sizes were considerably increased. While the principal sieve sizes as per ISO 565 were adopted in the standard, due to practical consideration. The prevailing Indian sizes were also permitted temporarily which were proposed to be withdrawn in the next revision of the standard. This was to facilitate switch-over to ISO sieve sizes in a smooth manner.

In this revision, the Committee has decided to include the aperture sizes as specified in ISO 3310-1 : 2016 including the aperture sizes to corresponding R 20/3 series (principal size) and R 20 and R 40/3 series (supplementary size) as per ISO 3310-1 : 2016. This was in accordance with the decision taken during the last revision of the standard and also necessitated on the basis of the comments and requests received from the various stakeholders in view of the free export and global trade practices. It is intended to bring this standard at par with the ISO 565-1990 and ISO 3310-1 : 2016 to the extent possible.

Further, in this revision the material requirements for the sieve media and frame is improved to permit various new materials available for the product in the market. However, choice for the selection of the material is left to the user.

The aperture sizes specified in Table 2 of IS 460 (Part 1) : 1985 are also kept in this revision as Annex A which will be subsequently withdrawn once the stakeholders get used to this revised version.

This standard specifies that purchaser should supply certain information including material with enquiry and order for procurement of test sieves to suit the requirements.

The composition of the Committee responsible for the formulation of this standard is given at Annex B.

For the purpose of deciding whether a particular requirement of this standard is complied with the final value, observed or calculated, expressing the result of a test or analysis shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard

TEST SIEVES — SPECIFICATION

PART 1 WIRE CLOTH TEST SIEVES

(Fourth Revision)

1 SCOPE

1.1 This standard (Part 1) covers test sieves, with sieving medium of woven-wire cloth and other types, for use in testing in the classification of materials according to particle size.

1.2 It applies to test sieves having aperture sizes from 125 mm down to 0.020 mm (20 µm).

2 REFERENCES

The following standards contain provisions, which through reference in this text, constitute provisions of this standard. At the time of publication, the edition indicated were valid. All standards are subject to revision, and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent edition of the standard indicated below:

<i>IS No.</i>	<i>Title</i>
460 (Part 3) : 2020	Test sieves — Specification: Part 3 Method of examination of apertures of test sieves (<i>fourth revision</i>)
5421 : 2013	Glossary of terms relating to test sieves and test sieving

3 TERMINOLOGY

For the purpose of this standard, the definitions given in IS 5241 shall apply.

4 DESIGNATION

4.1 Test sieves are designated by the nominal size of aperture followed by the inscription 'IS Sieve'.

Examples:

- a) 5.60 mm IS Sieve, and
- b) 425 µm IS Sieve.

4.2 Nominal aperture sizes of 1 mm and above, as well as their associated tolerances and wire diameters, are expressed in millimetres (mm) and aperture sizes smaller than 1 mm, are expressed in micrometres (µm).

5 SIEVING MEDIUM**5.1 Materials for Sieving Media**

The sieving media may be manufactured from any suitable material, such as bronze, brass, stainless steel or synthetic materials. Plated or coated wires shall not be used in the test sieves. The purchaser should state specific requirements in the enquiry. However, the material selected shall not be prone to corrosion and should not be detrimental to desired sieving quality.

5.2 Wire Diameter

After the cloth is mounted in the sieve the average wire diameter at different positions across the sieving surface shall be uniform in order that the limits on aperture size can be obeyed. The aperture sizes, preferred wire diameters d_{nom} and the permissible range of choice of wire diameters d_{max} and d_{min} shall conform to Table 1 and Table 2. The wires in a test sieve shall have a same diameter in the warp and weft directions.

NOTE — The aperture size and wire diameter given in Annex A may also be used as per the customer requirement; however it is recommended to use the size given in the Table 1 and Table 2.

5.3 Weave

Wire cloth shall be woven to produce uniform square apertures within the tolerances given in 5.4. All aperture sizes apply for plain weave. But for aperture sizes of 63 µm and smaller, twilled weave is permissible. For aperture sizes of 4.00 mm and greater, the wire shall be crimped before weaving.

5.3.1 Perpendicularity of Wires

If the purchaser requires a tolerance on perpendicularity, this shall be included in the order. No tolerance on perpendicularity of warp and weft wires is specified in this standard, since users requirements may differ according to the material to be tested. A tolerance of $\pm 3^\circ$ from perpendicularity may be acceptable in many cases. A visual inspection of general appearance of perpendicularity is acceptable in other cases. It should be recognized that a test should apply to the general directions of the warp and weft wires over several apertures and not to a single aperture.

Table 1 Aperture Tolerances and Wire Diameters (125 mm to 1 mm)

(Clauses 5.2 and 5.4.1)

All values in millimetres.

Nominal Aperture Sizes <i>w</i>			Tolerances on Aperture Size			Sizes of Wire Diameters <i>d</i>		
Principal Sizes	Supplementary Sizes		For any Aperture Size	For Average Aperture Size	Maximum Standard Deviation	Preferred Sizes (Nominal)	Permissible Range of Choice	
R 20/3	R 20	R 40/3	+X	±Y	σ_0	d_{nom}	d_{max}	d_{min}
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
125	125	125	4.056	3.296	b	8	9.2	6.8
	112		3.739	2.960		8	9.2	6.8
		106	3.590	2.805		6.3	7.2	5.4
	100		3.438	2.649		6.3	7.2	5.4
90	90	90	3.180	2.389		6.3	7.2	5.4
	80		2.915	2.129		6.3	7.2	5.4
		75	2.779	1.999		6.3	7.2	5.4
	71		2.668	1.894		5.6	6.4	4.8
63	63	63	2.443	1.685		5.6	6.4	4.8
	56		2.240	1.501		5	5.8	4.3
		53	2.150	1.423		5	5.8	4.3
	50		2.060	1.344		5	5.8	4.3
45	45	45	1.906	1.212	1.000	4.5	5.2	3.8
	40		1.748	1.080	1.000	4.5	5.2	3.8
		37.5	1.667	1.014	1.000	4.5	5.2	3.8
	35.5		1.601	0.961	1.000	4	4.6	3.4
31.5	31.5	31.5	1.467	0.855	0.907	4	4.6	3.4
	28		1.345	0.762	0.801	3.55	4.1	3
		26.5	1.292	0.722	0.757	3.55	4.1	3
	25		1.238	0.682	0.714	3.55	4.1	3
22.4	22.4	22.4	1.143	0.613	0.641	3.55	4.1	3
	20		1.052	0.548	0.575	3.15	3.6	2.7
		19	1.013	0.522	0.547	3.15	3.6	2.7
	18		0.974	0.495	0.520	3.15	3.6	2.7
16	16	16	0.894	0.441	0.467	3.15	3.6	2.7
	14		0.811	0.387	0.413	2.8	3.2	2.4
		13.2	0.777	0.365	0.392	2.8	3.2	2.4
	12.5		0.747	0.346	0.374	2.5	2.9	2.1
11.2	11.2	11.2	0.690	0.311	0.339	2.5	2.9	2.1
	10		0.636	0.279	0.307	2.5	2.9	2.1
		9.5	0.613	0.265	0.294	2.24	2.6	1.9
	9		0.589	0.251	0.281	2.24	2.6	1.9

Table 1 (Concluded)

Nominal Aperture Sizes <i>w</i>			Tolerances on Aperture Size			Sizes of Wire Diameters <i>d</i>		
Principal Sizes	Supplementary Sizes		For any Aperture Size	For Average Aperture Size	Maximum Standard Deviation	Preferred Sizes (Nominal)	Permissible Range of Choice	
R 20/3	R 20	R 40/3	+X	±Y	σ_0	d_{nom}	d_{max}	d_{min}
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
8	8	8	0.542	0.224	0.254	2	2.3	1.7
	7.1		0.497	0.200	0.229	1.8	2.1	1.5
		6.7	0.477	0.189	0.218	1.8	2.1	1.5
	6.3		0.456	0.178	0.207	1.8	2.1	1.5
5.6	5.6	5.6	0.420	0.159	0.188	1.6	1.9	1.3
	5		0.387	0.142	0.171	1.6	1.9	1.3
		4.75	0.373	0.135	0.164	1.6	1.9	1.3
	4.5		0.359	0.128	0.157	1.4	1.7	1.2
4	4	4	0.330	0.114	0.143	1.4	1.7	1.2
	3.55		0.304	0.102	0.130	1.25	1.5	1.06
		3.35	0.292	0.096	0.124	1.25	1.5	1.06
	3.15		0.279	0.091	0.118	1.25	1.5	1.06
2.8	2.8	2.8	0.257	0.081	0.108	1.12	1.3	0.95
	2.5		0.238	0.073	0.098	1	1.15	0.85
		2.36	0.228	0.069	0.094	1	1.15	0.85
	2.24		0.220	0.065	0.090	0.9	1.04	0.77
2	2	2	0.204	0.059	0.083	0.9	1.04	0.77
	1.8		0.189	0.053	0.076	0.8	0.92	0.68
		1.7	0.182	0.050	0.073	0.8	0.92	0.68
	1.6		0.175	0.047	0.070	0.8	0.92	0.68
1.4	1.4	1.4	0.159	0.042	0.063	0.71	0.82	0.6
	1.25		0.148	0.038	0.058	0.63	0.72	0.54
		1.18	0.142	0.036	0.056	0.63	0.72	0.54
	1.12		0.137	0.034	0.053	0.56	0.64	0.48
1	1	1	0.127	0.030	0.049	0.56	0.64	0.48
<p>NOTES</p> <p>1 All aperture sizes apply for plain weave.</p> <p>2 It is recommended that the principal sizes be used where possible, but if a series having smaller steps is required it should be drawn from only one of the supplementary series and not from both, that is, from either R 20 or R 40/3.</p> <p>3 On account of the small number of apertures to be measured, the calculation of the parameter σ_0 has no physical reality, denoted by 'b'.</p>								

Table 2 Aperture Tolerances and Wire Diameters (900 μm to 20 μm)

(Clauses 5.2 and 5.4.1)

All values in micrometres.

Nominal Aperture Sizes w			Tolerances on Aperture Size			Sizes of Wire Diameters d		
Principal Sizes	Supplementary Sizes		For any Aperture Size	For Average Aperture Size	Maximum Standard Deviation	Preferred Sizes (Nominal)	Permissible Range of Choice	
R 20/3	R 20	R 40/3	$+X$	$\pm Y$	σ_0	d_{nom}	d_{max}	d_{min}
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	900		118.3	27.6	45.5	500	580	430
		850	113.9	26.2	43.6	500	580	430
	800		109.4	24.8	41.8	450	520	380
710	710	710	101.1	22.2	38.4	450	520	380
	630		93.5	19.9	35.2	400	460	340
		600	90.6	19.0	34.0	400	460	340
	560		86.6	17.9	32.4	355	410	300
500	500	500	80.5	16.2	30.0	315	360	270
	450		75.2	14.7	27.9	280	320	240
		425	72.5	14.0	26.8	280	320	240
	400		69.8	13.3	25.7	250	290	210
355	355	355	64.7	12.0	23.7	224	260	190
	315		60.0	10.8	21.9	200	230	170
		300	58.2	10.4	21.2	200	230	170
	280		55.8	9.8	20.3	180	210	150
250	250	250	52.0	8.9	18.8	160	190	130
	224		48.7	8.1	17.5	160	190	130
		212	47.1	7.8	16.9	140	170	120
	200		45.4	7.4	16.3	140	170	120
180	180	180	42.7	6.8	15.3	125	150	106
	160		39.8	6.3	14.2	112	130	95
		150	38.3	6.0	13.7	100	115	85
	140		36.8	5.7	13.1	100	115	85
125	125	125	34.5	5.2	12.2	90	104	77
	112		32.4	4.8	11.5	80	92	68
		106	31.4	4.7	11.1	71	82	60
	100		30.4	4.5	10.8	71	82	60
90	90	90	28.6	4.2	10.1	63	72	54
	80		26.8	3.9	9.5	56	64	48
		75	25.9	3.7	9.1	50	58	43
	71		25.1	3.6	8.9	50	58	43

Table 2 (Concluded)

Nominal Aperture Sizes w			Tolerances on Aperture Size			Sizes of Wire Diameters d		
Principal Sizes	Supplementary Sizes		For any Aperture Size	For Average Aperture Size	Maximum Standard Deviation	Preferred Sizes (Nominal)	Permissible Range of Choice	
R 20/3	R 20	R 40/3	+X	$\pm Y$	σ_0	d_{nom}	d_{max}	d_{min}
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
63	63	63	23.6	3.4	8.3	45	52	38
	56		22.1	3.2	7.8	40	46	34
		53	21.5	3.1	7.6	36	41	31
	50		20.9	3.0	7.3	36	41	31
45	45	45	19.7	2.8	6.9	32	37	27
	40		18.6	2.7	6.5	32	37	27
		38	18.1	2.6	6.4	30	35	24
R'10	36		17.6	2.6	6.2	30	35	24
32			16.6	2.4	5.9	28	33	23
25			14.8	2.2	5.2	25	29	21
20			13.3	2.1	4.7	20	23	17

NOTES

1 All aperture sizes apply for plain weave.

2 Aperture sizes of 63 μm and smaller apply also for twilled weave. It should be noted, however, that plain and twilled weave sieves can have different sieving characteristics.

3 It is recommended that the principal sizes be used where possible, but if a series having smaller steps is required it should be drawn from only one of the supplementary series and not from both, this is, from either R 20 or R 40/3.

5.4 Aperture Tolerances

5.4.1 The nominal aperture w and tolerances, X and Y as given in Table 1 and Table 2 shall apply separately to the warp and weft directions. They shall apply to the aperture sizes as measured on the centre lines of the aperture (see Fig. 1).

5.4.2 No aperture size shall exceed the nominal size by more than X .

5.4.3 The average aperture size shall not depart from the nominal size by more than $\pm Y$.

5.4.4 Not more than 6 percent of the total number of apertures shall have sizes between 'nominal X ' + and 'nominal + mean of X and Y '.

5.4.5 When a sieve has less than 50 apertures, not more than 3 apertures shall fall within the limits of 'nominal X ' and nominal mean of X and Y .

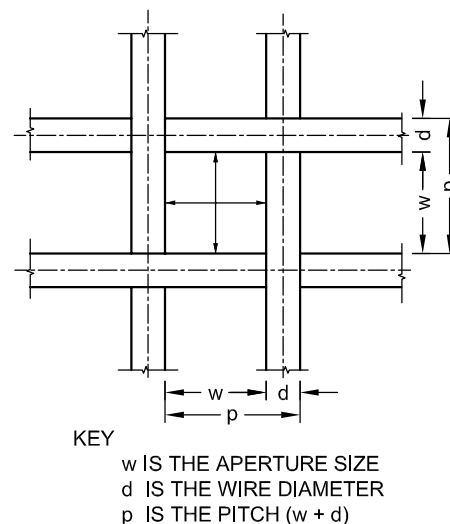


FIG. 1 POINTS OF MEASUREMENT OF APERTURE WIDTH

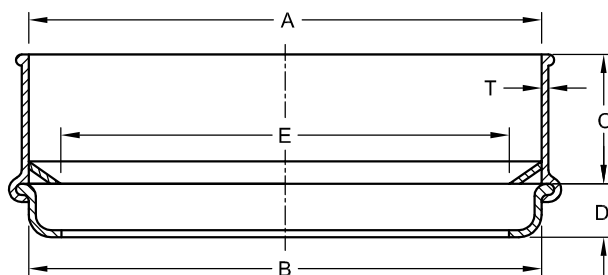
6 TEST SIEVE FRAME

6.1 Material

The sieve frame may be manufactured from any suitable material, such as bronze, brass, stainless steel or synthetic materials. The purchaser should state specific requirements in the enquiry. The material selected shall not be prone to corrosion and should not be detrimental to desired sieving quality.

6.2 Shapes and Sizes

The shapes and sizes shall be as given in Table 3 (see Fig. 2).



KEY

- A - TOP INTERNAL DIAMETER / LENGTH
- B - BOTTOM INTERNAL DIAMETER / LENGTH
- T - MINIMUM THICKNESS
- E - DIAMETER OR LENGTH OF EFFECTIVE SIEVING SURFACE
- C - DEPTH FROM TOP EDGE TO SIEVING SURFACE
- D - DEPTH FROM BOTTOM EDGE TO SIEVING SURFACE

FIG. 2 TYPICAL DESIGN AND DIMENSIONS OF FRAME FOR TEST SIEVE

6.3 It is recommended that the 200 mm round frame should be used as far as possible, especially for wire cloth up to 1 mm nominal aperture size. For large aperture sizes the 300 mm round or square sieve may be required, or even larger sieves of 450 mm size for aperture sizes greater than 25 mm and large sample quantities. As per the purchaser requirement single frame construction sieves may also be supplied.

NOTE — The shape and size of the sieve have little effect on the results of sieving operation.

6.4 Cover and Receiver

When specified by the purchaser a cover and receiver shall be provided for sieves, of the same material and thickness as the sieve frame (see Fig. 3). The cover of the sieve shall be suitable to ensure snug tight. The depth of the receiver shall be equal to the dimension (C) specified in Table 3.

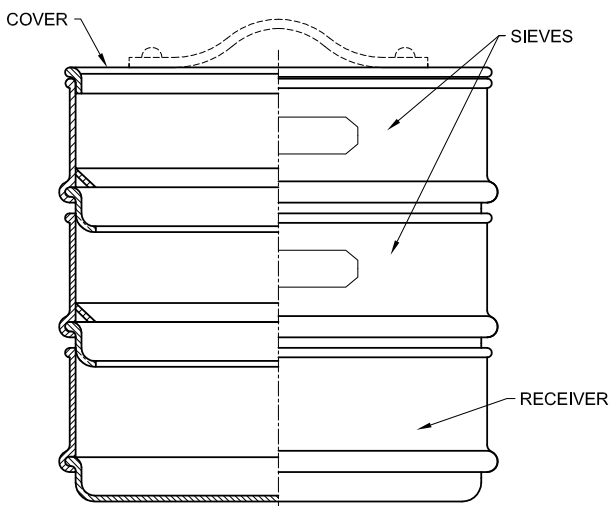


FIG. 3 NEST OF TEST SIEVES WITH COVER AND RECEIVER

Table 3 Recommended Shapes and Sizes of Test Sieve Frames

(Clauses 6.2 and 6.4)

All dimensions in millimetres.

Sl No.	Shape	Nominal Size	Top Internal Diameter/Length	Bottom Internal Diameter/Length	Minimum Thickness	Diameter/Length of Effective Sieving Surface		Depth From Top Edge to Sieving Surface	Depth from Bottom Edge to Sieving Surface
			A^*	B^*	T	$\overbrace{\begin{matrix} E \\ \textit{Min} \qquad \textit{Max} \end{matrix}}$		C	D
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
i)	Round	200	200^{+1}_{-0}	200^{+1}_{-0}	0.45	185	200	50^{+2}_{-2}	15^{+1}_{-1}
ii)	Round or Square	300	300^{+1}_{-0}	300^{+1}_{-0}	1.00	275	300	75^{+2}_{-2}	15^{+1}_{-1}
iii)	Round or Square	450	450^{+1}_{-0}	450^{+1}_{-0}	1.00	425	450	100^{+2}_{-2}	20^{+1}_{-1}

NOTES

1 Where so desired, sieves having 25 mm depth from top edge to sieving may also be supplied.

2 When fine wire mesh is used in large sieves, it may be supported by a spider or other means.

* A and B shall be such as to make the sieves nestable as required in 8.

7 FINISH

The sieving surface, frame receivers, and covers, shall be smoothly finished. Seal between frame and sieving medium shall be so formed as to prevent lodging of the material to be sieved. There shall be no lacquer on surfaces which come into contact with sample.

8 NESTING

8.1 The test sieves shall nest snugly with each other and with the lid and receiver of the same shape and size.

8.2 Sieves complete with a lid and receiver in a set, shall be assembled so that escape of sample material during a test sieving operation is prevented.

9 MOUNTING

The sieving media shall be so mounted in the frame as to be held firmly and equally taut in all directions without any distortion.

10 TESTING

Each of the test sieves shall be tested to meet the requirements of this standard. The apertures of the test sieves shall be examined in accordance with IS 460 (Part 3). If calibration is required, it shall be clearly stated in the enquiry and order.

11 INFORMATION TO BE SUPPLIED BY THE PURCHASER

The purchaser should state the following with any

enquiry and order:

- a) Designation of the sieve;
- b) Sieving medium (material);
- c) Frame shape, size and material;
- d) Whether a receiver is required;
- e) Whether a cover is required;
- f) Whether calibration is required; and
- g) Whether statement on wire diameter is required.

12 MARKING

12.1 Each sieve complying with this standard shall be legibly and indelibly marked with the following information.

- a) manufacturer's name or trade-mark;
- b) Designation of sieve
- c) material of the sieving media;
- d) material of the sieve frame;
- e) An identification number/batch number; and
- f) wire diameter, when the purchaser requests.

12.2 BIS Certification Marking

The product(s) conforming to the requirements of this standard may be certified as per the conformity assessment schemes under the provisions of the *Bureau of Indian Standards Act, 2016* and the Rules and Regulations framed thereunder, and the product(s) may be marked with the Standard Mark.

ANNEX A

(Foreword and Note under 4.2)

TEST SIEVES COVERED UNDER IS 460 (PART 1) : 1985

A-1 Table 4 given the erstwhile test sieve sizes as IS 460 (Part 1) : 1985 ‘Specification for test sieves: covered in the last version of this standard, namely Part 1 Wire cloth test sieves (*third revision*).

Table 4 Aperture Tolerances and Wire Diameters

(Clause A-1)

Nominal Aperture Sizes	Tolerances of Aperture Size			Wire Diameters		
	Maximum Tolerance for Any One Aperture $+X$	Tolerance for Average Aperture Size $\pm Y$	Intermediate Tolerance $+Z$	Preferred Size d	Permissible Range of Choice	
					d_{\max}	d_{\min}
w						
(1) mm	(2) mm	(3) mm	(4) mm	(5) mm	(6) mm	(7) mm
125.0	4.51	3.66	4.09	8	9.2	6.8
106.0	3.99	3.12	3.55	6.3	7.2	5.4
100.0	3.82	2.94	3.38	6.3	7.2	5.4
90.0	3.53	2.66	3.09	6.3	7.2	5.4
80.0	3.24	2.37	2.80	6.3	7.2	5.4
75.0	3.09	2.22	2.65	6.3	7.2	5.4
63.0	2.71	1.87	2.29	5.6	6.4	4.8
53.0	2.39	1.58	1.99	5	5.8	4.3
50.0	2.29	1.49	1.89	5	5.8	4.3
45.0	2.12	1.35	1.73	4.5	5.2	3.8
40.0	1.94	1.20	1.57	4.5	5.2	3.8
37.5	1.85	1.13	1.49	4.5	5.2	3.8
31.5	1.63	0.95	1.29	4	4.6	3.4
26.5	1.44	0.80	1.12	3.55	4.1	3
25.0	1.38	0.76	1.07	3.55	4.1	3
22.4	1.27	0.68	0.98	3.55	4.1	3
20.0	1.17	0.61	0.89	3.15	3.6	2.7
19.0	1.13	0.58	0.85	3.15	3.6	2.7
16.0	0.99	0.49	0.74	3.15	3.6	2.7
13.2	0.86	0.41	0.64	2.8	3.2	2.4
12.5	0.83	0.39	0.61	2.5	2.9	2.1
11.2	0.77	0.35	0.56	2.5	2.9	2.1
10.0	0.71	0.31	0.51	2.5	2.9	2.1
9.50	0.68	0.30	0.49	2.24	2.6	1.9
8.00	0.60	0.25	0.43	2	2.3	1.7
6.70	0.53	0.21	0.37	1.8	2.1	1.5
6.3	0.51	0.20	0.35	1.8	2.1	1.5
5.60	0.47	0.18	0.32	1.6	1.9	1.3
4.75	0.41	0.15	0.28	1.6	1.9	1.3

Table 4 (Concluded)

Nominal Aperture Sizes	Tolerances of Aperture Size			Wire Diameters		
	Maximum Tolerance for Any One Aperture $+X$	Tolerance for Average Aperture Size $\pm Y$	Intermediate Tolerance $+Z$	Preferred Size d	Permissible Range of Choice	
					d_{\max}	d_{\min}
w	(2)	(3)	(4)	(5)	(6)	(7)
mm	mm	mm	mm	mm	mm	mm
4.00	0.37	0.13	0.25	1.4	1.7	1.2
3.55	0.32	0.11	0.22	1.25	1.5	1.06
2.60	0.29	0.09	0.19	1.12	1.3	0.95
2.36	0.25	0.08	0.17	1	1.15	0.85
2.00	0.23	0.07	0.15	0.9	1.04	0.77
1.70	0.20	0.06	0.13	0.8	0.92	0.68
1.40	0.18	0.05	0.11	0.71	0.82	0.6
1.18	0.16	0.05	0.10	0.63	0.72	0.54
1.00	0.14	0.03	0.09	0.56	0.64	0.48
μm	μm	μm	μm	μm	μm	μm
850	127	29	78	500	580	430
710	112	25	69	450	520	380
600	101	21	61	400	460	340
500	89	18	54	315	360	270
425	81	16	48	280	320	240
355	72	13	43	224	260	190
300	65	12	38	200	230	170
250	58	9.9	34	160	190	130
212	52	8.7	30	140	170	120
180	47	7.6	27	125	150	106
150	43	6.6	25	100	115	85
125	38	5.8	22	90	104	77
106	35	5.2	20	71	82	60
90	32	4.6	18	63	72	54
75	29	4.1	17	50	58	43
63	26	3.7	15	45	52	38
53	24	3.4	14	36	41	31
45	22	3.1	13	32	37	27
38	20	2.9	11	30	35	24
32	19	2.7	11	28	33	23

ANNEX B

(Foreword)

COMMITTEE COMPOSITION

Sieves, Sieving and Other Sizing Methods Sectional Committee, CED 55

<i>Organization</i>	<i>Representative(s)</i>
In Personal Capacity (90, Savita Vihar, Vikas Marg, Delhi 110092)	DR R. P. SINGHAL (Chairman)
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Member Secretary

DR MANOJ KUMAR RAJAK
SCIENTIST 'D' (CIVIL ENGINEERING), BIS

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